



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/811,758

03/29/2004

Patrick Morrow

42P17268

2841

8791

7590

04/20/2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD  
SEVENTH FLOOR  
LOS ANGELES, CA 90025-1030

EXAMINER

GOUDREAU, GEORGE A

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/811,758

Applicant(s)

MORROW ET AL.

Examiner

George A. Goudreau

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on (3-29-04' to 8-23-04').  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*George A. Goudreau*  
GEORGE GOUDREAU  
PRIMARY EXAMINER  
4-05'

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

Art Unit: 1763

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Taniguchi et. al. (JP 10-335,195).

Taniguchi et. al. disclose a process for fabricating a SOI device which is comprised of the following steps:

- A thermal oxide layer (2 a ) is grown on the surfaces of a CZ-Si wafer (2).;
- A bevel (1 a) is wet etched into the surface of a CZ-Si wafer (1) using a piece of tape as an etch mask, and a solution which is comprised of HNO<sub>3</sub>-HF as a wet etchant.;
- The tape is removed from the surface of the wafer (1).;
- The wafer (1) is laminated onto the SiO<sub>2</sub> layer (2 a) on the surface of the wafer (2) to create an SOI device.; and
- The top surface of the wafer (1) is then machined to thin CZ-Si layer on top of a SiO<sub>2</sub> layer on top of a CZ-Si wafer.

This is discussed specifically in the abstract; and discussed in general in columns 1-8. This is shown in figures 1-7.

Art Unit: 1763

3. Claims 1-4, 6-9, and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by MacNamara et. al. (6,841,848).

MacNamara et. al. disclose a process for fabricating a SOI device which is comprised of the following steps:

- A thermal oxide layer (22) is grown on the surface of a CZ-Si wafer (11).;
- A patterned photo resist etch mask (23) is formed onto the surface of the thermal oxide layer (22).;
- The thermal oxide layer is removed from the surface of the wafer in any region not protected by the photo resist etch mask.;
- A plasma which is comprised of (SF<sub>6</sub>-C<sub>4</sub>F<sub>8</sub>), and the patterned photo resist etch mask (23) are used in the rie etching of the peripheral layer (26), and the Si wafer (13) to produce a recess (25) in the device wafer (9).;
- The resist etch mask is removed from the surface of the device wafer (9).; and
- The device wafer (9) is then laminated to the handle wafer (10) to form the SOI device.

This is discussed specifically in columns 8-13; and discussed in general in columns 1-16. This is shown in figures 1-15.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1763

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 5, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference as applied in paragraph 3 above.

The reference as applied in paragraph 3 above fail to specifically disclose the following aspects of applicant's claimed invention:


-the specific usage of a wet etching process to pattern the CZ-Si wafer in the process taught above

It would have been obvious to one skilled in the art to use a wet etchant in place of the rie etchant used in the etching of the Si wafer in the process taught above based upon the following. The usage of a wet etchant to etch Si selectively to a photo resist etch mask is conventional or at least well known in the etching arts. (The examiner takes official notice in this regard.) Further, this simply represents the usage of an alternative, and at least equivalent means for conducting the etching process taught above to the specific means, which are taught above.

Art Unit: 1763

7. Any inquiry concerning this communication should be directed to examiner

George A. Goudreau at telephone number (571)-272-1434.

  
George A. Goudreau  
Primary Examiner  
Art Unit 1763